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Monsanto



FROM (NAME-LOCATION-PHONE) **B.S. Yare** (694-6370) **MCC Environmental Systems** **F2WJ**
DATE : May 4, 1990 **cc:** B.M. Hughes - U4E
G.W. Mappes - U1F
W.L. Smull - G4WM
N. Valkenburg - G&M 47
SUBJECT : Sector B Sediment and Soil Sampling
REFERENCE : NA
TO : R.A. Kimmerle - U4E

Geraghty and Miller may be collecting 180 sediment and soil samples in Sector B of Dead Creek. Up to 36 additional samples may be submitted for QA/QC analyses, e.g. duplicates and trip blanks. Analytical support is needed from ESC to insure accurate and timely characterization of these samples. The following analyses and detection limits are required:

ORGANICS

DETECTION LIMIT

Volatiles	1 ppm
Semi-Volatiles	10 ppm
PCBs	1 ppm
Dioxins	1 ppb

METALS

Arsenic	1 ppm
Cadmium	1 ppm
Chromium	1 ppm
Copper	1 ppm
Lead	1 ppm
Mercury	1 ppm
Phosphorous	1 ppm
Nickel	1 ppm
Selenium	1 ppm
Thallium	1 ppm
Zinc	1 ppm

CYANIDE

INDICATORS

Total Ion Chromatography

Water Analysis

Carbon	%
Total Chlorine	%
Organic Chlorine	%

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The volatile and semivolatile analyses must be capable of detecting the halogenated organic compounds listed in Attachment 1.

Paint filter tests and analyses for ignitability, corrosivity, reactivity and EP toxicity are also required for these samples. If a sample fails the paint filter test, analysis of the filtrate for the following parameters will be required:

<u>PARAMETER</u>	<u>DETECTION LIMIT</u>
Arsenic	500 ppm
Cadmium	100 ppm
Chromium	500 ppm
Lead	500 ppm
Mercury	20 ppm
Nickel	134 ppm
Selenium	100 ppm
Thallium	130 ppm
Cyanide	1000 ppm

The results of this testing should be summarized as shown in Attachment 2. Actual analytical results should be summarized in tabular form and included as an appendix to a report describing methods, procedures and results. All data will be supplied to Geraghty and Miller on diskettes in a compatible spread sheet or data base format for use in removal volume determinations. All lab reports must be included as an appendix to this report.

ESC will need to prepare a Quality Assurance Project Plan detailing the methods and procedures to be used in conducting these analyses. This plan must take current regulatory guidance into consideration. Method development samples may be supplied to ESC by Geraghty and Miller in early May.

Sampling may be done in late May and the analyses must be completed in 30 days. If you have any questions or need additional information, please call.

Bruce S. Yare
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Attachment 1. California List Halogenated Organic Compounds.
Sector B Sediment and Soil Sampling Program, Sauget, Illinois

Volatiles	Semi-volatiles
Bromodichloromethane	Bis (2-Chloroethyl)ethane
Bromomethane	Bis (2-Chloroethyl)ether
Carbon Tetrachloride	Bis (2-Chloropropyl) ether
Chlorobenzene	p-Chloraniline
2-Chloro-1, 3-butadiene	Chlorobenzaldehyde
Chlorodibromomethane	p-Chloro-m-cresol
Chloroethene	2-Chloronaphthalene
2-Chloroethyl vinyl ether	2-Chlorophenol
Chloroform	3-Chloropropanone
Chloromethane	m-Dichlorobenzene
3-Chloropropene	o-Dichlorobenzene
1,2-Dibromo-3-chloropropane	p-Dichlorobenzene
1,2-Dibromomethane	3,3'-Dichlorobenzidine
Dibromomethane	2,4-Dichlorophenol
Trans-1,4-Dichloro-2-butene	2,6-Dichlorophenol
Dichlorodifluoromethane	Hexachlorobenzene
1,1-Dichloroethane	Hexachlorobutadiene
1,2-Dichloroethane	Hexachlorocyclopentadiene
1,1,1-Dichloroethane	Hexachloroethane
Trans-1,2-Dichloroethene	Hexachloropropene
1,2-Dichloropropane	Hexachloropropene
Trans-1,3-Dichloropropane	4,4'-Methylenbis (2-Chloroaniline)
Iodomethane	Pentachlorobenzene
Methylene chloride	Pentachloroethane
1,1, 1,2-Tetrachloroethane	Pentachlorotrobenzene
1,1, 2,2-Tetrachloroethane	Pentachlorophenol
Tetrachloroethene	Pronamide
Tribromomethane	1,2,4,5-Tetrachlorobenzene
1,1,1-Trichloroethane	2,3,4,6-Tetrachlorophenol
1,1,2-Trichloroethane	1,2,4-Trichlorobenzene
Trichloroethene	2,4,5-Trichlorophenol
Trichloromonofluoromethane	2,4,6-Trichlorophenol
1,2,3-Trichloropropane	Tris (2,3-dibromopropyl) -
Vinyl chloride	phosphate
cis-1,3-Dichloropropene	
Organochlorine Pesticides	Dioxins & Furans
Aldrin	Hexachlorobenzo-p-dioxins
beta-BHC	Hexachlorobenzofuran
gamma-BHC	Pentachlorobenzo-p-dioxins
DDD	Pentachlorobenzofuran
DDT	Tetrachlorobenzo-p-dioxins
Endosulfan I	Tetrachlorobenzofuran
Endrin	2,3,7,8-Tetrachlorobenzo-p-dioxin
Heptachlor	
Isodrin	
Methoxychlor	
PCBs	Phenoxyacetic Acid Herbicides
Aroclor 1016	2,4-Dichlorophenoxyacetic acid
Aroclor 1232	Silvex
Aroclor 1248	2,4,5-T
Aroclor 1260	
PCBs not otherwise specified	

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Attachment 2. California List Decision Matrix.
Sector B Sediment and Soil Sampling Program, Sauget, Illinois

<u>PARAMETER</u>	<u>SAMPLE</u>
Paint Filter Test	Pass/Fail
Filtrate:	
Arsenic	Pass/Fail
Cadmium	Pass/Fail
Chromium	Pass/Fail
Lead	Pass/Fail
Mercury	Pass/Fail
Nickel	Pass/Fail
Selenium	Pass/Fail
Thallium	Pass/Fail
Cyanide(free)	Pass/Fail
Ignitability	Pass/Fail
Corrosivity	Pass/Fail
Reactivity	Pass/Fail
EP Toxicity	Pass/Fail
PCBs	Pass/Fail
HOCs	Pass/Fail

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